

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims

38. (previously presented) An isolated nucleic acid molecule encoding the amino acid sequence of SEQ ID NO:2.
39. (previously presented) The nucleic acid molecule according to claim 38 which is a DNA molecule.
40. (previously presented) The nucleic acid molecule of Claim 39, wherein said DNA molecule is a cDNA molecule.
41. (canceled)
42. (previously presented) A DNA expression vector comprising a nucleic acid molecule of Claim 38.
43. (previously presented) A host cell transformed or transfected with the vector of Claim 42.
44. (previously presented) The host cell according to Claim 43, which cell is a mammalian cell.
45. (previously presented) The host cell according to Claim 44, which mammalian cell is a COS-7 cell.
46. (previously presented) An isolated receptor protein comprising the amino acid sequence of SEQ ID NO:2.
47. (previously presented) A HEK 293 or COS-7 5-HT₄₍₀₎ cell line transfected with the expression vector of Claim 42.

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48. (canceled)

49. (previously presented) A method of determining whether a compound is an agonist or an antagonist of a ligand of a human 5-HT_{4(R)} receptor, which method comprises contacting a cell transformed or transfected with an expression vector according to Claim 42 capable of expressing said receptor with said compound in the presence of said ligand and monitoring cAMP formation in said cell, wherein a change in cAMP formation in the cell identifies the compound as an agonist or an antagonist.

50. (previously presented) The method of Claim 49 wherein said cell is a human cell.

51. (previously presented) A method of determining whether a compound binds to a human 5-HT_{4(R)} receptor which method comprises contacting a cell, or a membrane preparation from the cell wherein the cell was transformed or transfected with an expression vector according to Claim 42 capable of expressing said receptor, with said compound and determining the binding affinity of said compound for said receptor.

52. (currently amended) A kit for determining whether a compound is an agonist or an antagonist of a 5-HT_{4(R)} ligand, which kit comprises a cell according to Claim 42, means for contacting said compound and said ligand with said cell and means for measuring cAMP formation in said cell.

53. (currently amended) A kit according to Claim 34-52 wherein said cell is a COS-7 cell.

54. (canceled)

55. (canceled)

56. (canceled)

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